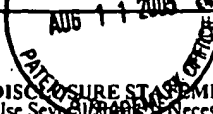


FORM PTO-1449 (Modified)				U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-00700		Serial No.: 10/669,495	
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(37 CFR § 1.98(b))						Filing Date: September 23, 2003		Group Art Unit: 3746	
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EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.									

FORM PTO-1449
(Modified)

OCT 08 2004

U.S. Department of Commerce
Patent and Trademark Office

Attorney Docket No.: COOL-00700

Serial No.: 10/669,495

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Use Several Sheets If Necessary)

Applicants: Thomas W. Kenny et al.

(37 CFR § 1.889)

Filing Date: September 23, 2003

Group Art Unit: 3746

U.S. PATENT DOCUMENTS

Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
mk	AA	5,179,500	01/12/93	Koubek et al.	361	385	04/02/91
	AB	5,839,290	11/24/98	Nazeri	62	119	01/24/97
	AC	2002/0096312 A1	07/25/02	Korin	165	58	12/04/01
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Date Considered:

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449
(Modified)U.S. Department of Commerce
Patent and Trademark Office

Attorney Docket No.: COOL-00700

Serial No.: 10/669,495

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Use Several Sheets If Necessary)

Applicants: Thomas W. Kenny et al.

Filing Date: September 23, 2003

Group Art Unit: 3746

(37 CFR § 1.98(b))

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mk	AA	3,267,859	08/23/66	S. T. Jutila	103	1	02/18/64
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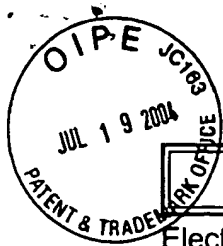
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Date Considered: 10-5-05

EXAMINER:

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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of
Invention

MICRO-FABRICATED ELECTROKINETIC PUMP WITH
ON-FRIT ELECTRODE

Application Number: 10/669495



Confirmation Number: 3987

First Named Applicant: Thomas Kenny

Attorney Docket Number:

Search string: (3948316 or 5161089 or 5228502 or 5239443
or 5265670 or 5978220 or 5993750 or
6729383).pn.

Certification: This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

US Patent Documents

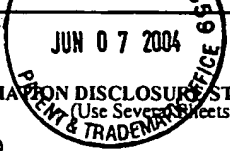
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7-19-04

Signature


Examiner Name	Date
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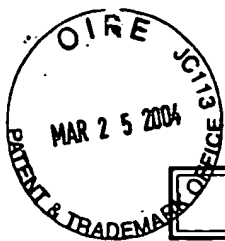
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(37 CFR § 1.98(b))			Filing Date: September 23, 2003	Group Art Unit: 3746

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Examiner: 	Date Considered: 10-5-05
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3-25-04

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0


Title of Invention	MICRO-FABRICATED ELECTROKINETIC PUMP WITH ON-FRIT ELECTRODE																																																																																														
<p>Application Number: 10/669495 </p> <p>Confirmation Number: 3987</p> <p>First Named Applicant: Thomas Kenny</p> <p>Attorney Docket Number:</p> <p>Search string: (3654988 or 3817321 or 3823572 or 3923426 or 3929154 or 4109707 or 4194559 or 4248295 or 4138996 or 4312012 or 4540115 or 4450472 or 4485429 or 4516632 or 4561040 or 4567505 or 4573067 or 4664181 or 4758926 or 4866570 or 4868712 or 4894709 or 4896719 or 4908112 or 4938280 or 5009760 or 5016138 or 5057908 or 5058627 or 5070040 or 5083194 or 5088005 or 5096388 or 5099311 or 5099910 or 5125451 or 5131233 or 5203401 or 5218515 or 5219278 or 5232047 or 5239200 or 5263251 or 5274920 or 5308429 or 5309319 or 5317805 or 5325265 or 5336062 or 5380956).pn.</p> <p>US Patent Documents</p> <p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p> <table border="1"><thead><tr><th>init</th><th>Cite.No.</th><th>Patent No.</th><th>Date</th><th>Patentee</th><th>Kind</th><th>Class</th><th>Subclass</th></tr></thead><tbody><tr><td><input checked="" type="checkbox"/></td><td>1</td><td>3654988</td><td>1972-04-11</td><td>Clayton, III</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>2</td><td>3817321</td><td>1974-06-18</td><td>von Cube et al.</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>3</td><td>3823572</td><td>1974-07-16</td><td>Cochran, Jr.</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>4</td><td>3923426</td><td>1975-12-02</td><td>Theeuwes</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>5</td><td>3929154</td><td>1975-12-30</td><td>Goodwin</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>6</td><td>4109707</td><td>1978-08-29</td><td>Wilson et al.</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>7</td><td>4194559</td><td>1980-03-25</td><td>Eastman</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>8</td><td>4248295</td><td>1981-02-03</td><td>Ernst et al.</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>9</td><td>4138996</td><td>1979-02-13</td><td>Cartland</td><td></td><td></td><td></td></tr><tr><td><input checked="" type="checkbox"/></td><td>10</td><td>4312012</td><td>1982-01-19</td><td>Frieser et al.</td><td></td><td></td><td></td></tr></tbody></table>								init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass	<input checked="" type="checkbox"/>	1	3654988	1972-04-11	Clayton, III				<input checked="" type="checkbox"/>	2	3817321	1974-06-18	von Cube et al.				<input checked="" type="checkbox"/>	3	3823572	1974-07-16	Cochran, Jr.				<input checked="" type="checkbox"/>	4	3923426	1975-12-02	Theeuwes				<input checked="" type="checkbox"/>	5	3929154	1975-12-30	Goodwin				<input checked="" type="checkbox"/>	6	4109707	1978-08-29	Wilson et al.				<input checked="" type="checkbox"/>	7	4194559	1980-03-25	Eastman				<input checked="" type="checkbox"/>	8	4248295	1981-02-03	Ernst et al.				<input checked="" type="checkbox"/>	9	4138996	1979-02-13	Cartland				<input checked="" type="checkbox"/>	10	4312012	1982-01-19	Frieser et al.			
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14	4516632	1985-05-14	Swift et al.
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16	4567505	1986-01-28	Pease et al.
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18	4664181	1987-05-12	Sumberg
19	4758926	1988-07-19	Herrell et al.
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21	4868712	1989-09-19	Woodman
22	4894709	1990-01-16	Phillips et al.
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33	5096388	1992-03-17	Weinberg
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Examiner Name	Date
	10-5-05



ELECTRONIC INFORMATION DISCLOSURE STATEMENT

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Title of
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MICRO-FABRICATED ELECTROKINETIC PUMP WITH
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Application Number: 10/669495



Confirmation Number: 3987

First Named Applicant: Thomas Kenny

Attorney Docket Number:

Search string: (5383340 or 5421943 or 5427174 or 5436793
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Note: Applicant is not required to submit a paper copy of cited US Patent Documents

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	4	5436793	1995-07-25	Sanwo et al.			
	5	5459099	1995-10-17	Hsu			
	6	5508234	1996-04-16	Dusablon, Sr. et al.			
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	8	5514906	1996-05-07	Love et al.			
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	10	5548605	1996-08-20	Benett et al.			

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12	5579828	1996-12-03	Reed et al.
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15	5641400	1997-06-24	Kaltenbach et al.
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Examiner Name	Date
	10-5-05



ELECTRONIC INFORMATION DISCLOSURE STATEMENT

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Application Number: 10/669495



Confirmation Number: 3987

First Named Applicant: Thomas Kenny

Attorney Docket Number:

Search string: (6068752 or 6090251 or 6096656 or 6100541
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US Patent Documents

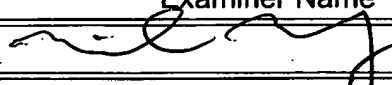
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13	6159353	2000-12-12	West et al.	
14	6171067	2001-01-09	Parce	B1
15	6174675	2001-01-16	Chow et al.	B1
16	6176962	2001-01-23	Soane et al.	B1
17	6186660	2001-02-13	Kopf-Sill et al.	B1
18	6210986	2001-04-03	Arnold et al.	B1
19	6216343	2001-04-17	Leland et al.	B1
20	6221226	2001-04-24	Kopf-Sill	B1
21	6227809	2001-05-08	Forster et al.	B1
22	6234240	2001-05-22	Cheon	B1
23	6238538	2001-05-29	Parce et al.	B1
24	6277257	2001-08-21	Paul et al.	B1
25	6287440	2001-09-11	Arnold et al.	B1
26	6301109	2001-10-09	Chu et al.	B1
27	6313992	2001-11-06	Hildenbrandt	B1
28	6317326	2001-11-13	Vogel et al.	B1
29	6321791	2001-11-27	Chow	B1
30	6322753	2001-11-27	Lindberg et al.	B1
31	6324058	2001-11-27	Hsiao	B1
32	6337794	2002-01-08	Agonafer et al.	B1
33	6351384	2002-02-26	Daikoku et al.	B1
34	6388317	2002-05-14	Reese	B1
35	6396706	2002-05-28	Wohlfarth	B1
36	6400012	2002-06-04	Miller et al.	B1
37	6406605	2002-06-18	Moles	B1
38	6415860	2002-07-09	Kelly et al.	B1
39	6416642	2002-07-09	Alajoki et al.	B1
40	6417060	2002-07-09	Tavkhelidze et al.	B1
41	6424531	2002-07-23	Bhatti et al.	B1
42	6443222	2002-09-03	Yun et al.	B1
43	6444461	2002-09-03	Knapp et al.	B1
44	6457515	2002-10-01	Vafai et al.	B1
45	6495015	2002-12-17	Schoeniger et al.	B1
46	6537437	2003-03-25	Galambos et al.	B1

47	6543521	2003-04-08	Sato et al.	B1
48	6553253	2003-04-22	Chang	B1
49	6572749	2003-06-03	Paul et al.	B1
50	6588498	2003-07-08	Reysin et al.	B1

Signature

Examiner Name	Date
	00-5-05



ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of
Invention

**MICRO-FABRICATED ELECTROKINETIC PUMP WITH
ON-FRIT ELECTRODE**

Application Number: 10/669495



Confirmation Number: 3987

First Named Applicant: Thomas Kenny

Attorney Docket Number:

Search string: (6591625 or 6632655 or 20010016985 or
20010024820 or 20010044155 or 20010045270
or 20010046703 or 20010055714 or
20020011330 or 20020134543).pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
<i>mk</i>	1	6591625	2003-07-15	Simon	B1		
<i>mk</i>	2	6632655	2003-10-14	Mehta et al.	B1		

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

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<i>mk</i>	1	20010016985	2001-08-30	Insley et al.	A1		
	2	20010024820	2001-09-27	Mastromatteo et al.	A1		
	3	20010044155	2001-11-22	Paul et al.	A1		
	4	20010045270	2001-11-29	Bhatti et al.	A1		
	5	20010046703	2001-11-29	Burns et al.	A1		
	6	20010055714	2001-12-27	Cettour-Rose et al.	A1		
	7	20020011330	2002-01-31	Insley et al.	A1		
	8	20020134543	2002-09-26	Estes et al.	A1		

Signature

3-25-04

Examiner Name	Date
<i>[Signature]</i>	10-5-05

P-5-05

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	MICRO-FABRICATED ELECTROKINETIC PUMP WITH ON FRIT-ELECTRODE
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Application Number : 10/669495
Confirmation Number: 3987
First Named Applicant: Thomas Kenny
Attorney Docket Number:
Art Unit:
Examiner:
Search string: (0596062 or 2273505 or 4211208 or 6397932 or 20020075645).pn



Certification: This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
1	1	0596062	1897-12-28	W. P. Firey			
2	2	2273505	1942-02-17	R. R. Florian			
3	3	4211208	1980-07-08	Lindner			
4	4	6397932	2002-06-04	Calaman et al.	B1		

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

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1	1	20020075645	2002-06-20	Kitano et al.	A1		

Signature

Examiner Name	Date
	10-5-05

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	MICRO-FABRICATED ELECTROKINETIC PUMP WITH ON-FRIT ELECTRODE
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Application Number : 10/669495



Confirmation Number: 3987

First Named Applicant: Thomas Kenny

Attorney Docket Number:

Art Unit:

Examiner:

Search string: (3361195 or 3771219 or 4644385 or 4893174 or 5386143 or 5658831 or 5675473 or 6140860 or 6477045 or 6492200 or 6578626).pn

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That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

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myk	1	3361195	1968-01-02	A. Meyerhoff et al.			
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	3	4644385	1987-02-17	Nakanishi et al.			
	4	4893174	1990-01-09	Yamada et al.			
	5	5386143	1995-01-31	Fitch			
	6	5658831	1997-08-19	Layton et al.			
	7	5675473	1997-10-07	McDunn et al.			
	8	6140860	2000-10-31	Sandhu et al.			
	9	6477045	2002-11-05	Wang	B1		
	10	6492200	2002-12-10	Park et al.	B1		
	11	6578626	2003-06-17	Calaman et al.	B1		

Signature

7-27-05

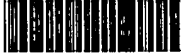
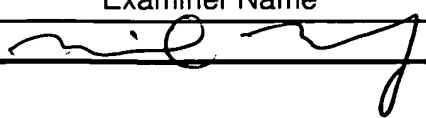
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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	MICRO-FABRICATED ELECTROKINETIC PUMP WITH ON-FRIT ELECTRODE						
Application Number :	10/669495						
Confirmation Number:	3987						
First Named Applicant:	Thomas Kenny						
Attorney Docket Number:							
Art Unit:							
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<p><u>Certification:</u> This Information Disclosure Statement was submitted under the following conditions, which satisfies the requirement under 37 CFR 1.97(e). The filer certified:</p> <p>That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement.</p>							
US Patent Documents							
Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
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	2	6167948	2001-01-02	Thomas	B1		
	3	6606251	2003-08-12	Kenny, Jr. et al.	B1		
US Published Applications							
Note: Applicant is not required to submit a paper copy of cited US Published Applications							
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Signature							
Examiner Name				Date			
				10-5-05			

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	MICRO-FABRICATED ELECTROKINETIC PUMP WITH ON-FRIT ELECTRODE
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Application Number : 10/669495
 Confirmation Number: 3987
 First Named Applicant: Thomas Kenny



Attorney Docket Number:

Art Unit:

Examiner:

Search string: (5043797 or 5490117 or 5740013 or 5768104 or 5921087 or 6366467 or 6459581 or 6600220 or 6743664 or 20020121105 or 20030121274 or 20040040695 or 20040052049 or 20040089008 or 20040125561 or 20040160741 or 20040188069).pn

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US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

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mk	1	5043797	1991-08-27	Lopes			
	2	5490117	1996-02-06	Oda et al.			
	3	5740013	1998-04-14	Roesner et al.			
	4	5768104	1998-06-16	Salmonson et al.			
	5	5921087	1999-07-13	Bhatia et al.			
	6	6366467	2002-04-02	Patel et al.	B1		
	7	6459581	2002-10-01	Newton et al.	B1		
	8	6600220	2003-07-29	Barber et al.	B2		
	9	6743664	2004-07-01	Liang et al.	B2		

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

3-9-05

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mk	1	20020121105	2002-09-05	McCarthy, Jr. et al.	A1		
	2	20030121274	2003-07-03	Wightman	A1		
	3	20040040695	2004-03-04	Chesser et al.	A1		
	4	20040052049	2004-03-18	Wu et al.	A1		
	5	20040089008	2004-05-13	Tilton et al.	A1		
	6	20040125561	2004-07-01	Gwin et al.	A1		
	7	20040160741	2004-08-19	Moss et al.	A1		
	8	20040188069	2004-09-30	Tomioka et al.	A1		

Signature

Examiner Name	Date
<i>[Signature]</i>	10-5-05

2-1-05

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	MICRO-FABRICATED ELECTROKINETIC PUMP WITH ON-FRIT ELECTRODE		
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Application Number : 10/669495

Confirmation Number: 3987


First Named Applicant: Thomas Kenny

Attorney Docket Number:

Art Unit:

Examiner:

Search string: (6438984 or 6581388 or 6587343).pn



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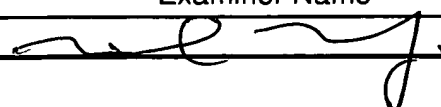
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	2	6581388	2003-06-24	Novotny et al.	B2		
	3	6587343	2003-07-01	Novotny et al.	B2		

Signature


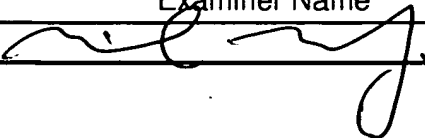
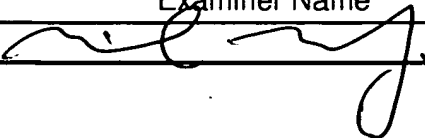
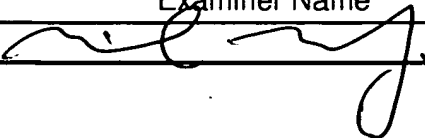
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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

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<p>US Patent Documents</p> <p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>init</th> <th>Cite.No.</th> <th>Patent No.</th> <th>Date</th> <th>Patentee</th> <th>Kind</th> <th>Class</th> <th>Subclass</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">mll</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2039593</td> <td style="text-align: center;">1936-05-05</td> <td style="text-align: center;">T. N. Hubbuch et al.</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">2</td> <td style="text-align: center;">4574876</td> <td style="text-align: center;">1986-03-11</td> <td style="text-align: center;">Aid</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">3</td> <td style="text-align: center;">6206022</td> <td style="text-align: center;">2001-03-27</td> <td style="text-align: center;">Tsai et al.</td> <td style="text-align: center;">B1</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">4</td> <td style="text-align: center;">6253835</td> <td style="text-align: center;">2001-07-03</td> <td style="text-align: center;">Chu et al.</td> <td style="text-align: center;">B1</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">5</td> <td style="text-align: center;">6437981</td> <td style="text-align: center;">2002-08-20</td> <td style="text-align: center;">Newton et al.</td> <td style="text-align: center;">B1</td> <td></td> <td></td> </tr> </tbody> </table>								init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass	mll	1	2039593	1936-05-05	T. N. Hubbuch et al.					2	4574876	1986-03-11	Aid					3	6206022	2001-03-27	Tsai et al.	B1				4	6253835	2001-07-03	Chu et al.	B1				5	6437981	2002-08-20	Newton et al.	B1		
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FORM PTO-1449
(Modified)U.S. Department of Commerce
Patent and Trademark Office

Attorney Docket No.: COOL-00700

Serial No.: 10/669,495

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Use Several Sheets If Necessary)

Applicants: Thomas W. Kenny et al.

Filing Date: September 23, 2003

Group Art Unit: 3746

(37 CFR § 1.98(b))

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
mk	AA	97212126.9	03/04/97	CN	B01D	61/42		X
mk	AB	2000-277540	10/06/00	JP	H01L	21/50		X

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

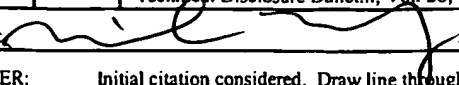
mk	AC	Stephen C. Jacobson et al., "Fused Quartz Substrates for Microchip Electrophoresis", Analytical Chemistry, Vo. 67, No. 13, July 1, 1995, pages 2059-2063.
	AD	Kendra V. Sharp et al., "Liquid Flows in Microchannels", 2002, Vol. 6, pages 6-1 to 6-38.
	AE	Shuchi Shoji et al., "Microflow devices and systems", J. Microech. Microeng. 4 (1994), pages 157-171, printed in the U.K.
	AF	Angela Rasmussen et al., "Fabrication Techniques to Realize CMOS-Compatible Microfluidic Microchannels", Journal of Microelectromechanical, Vo. 10, No. 2, June 2001, pages 286-297.
	AG	J. H. Wang et al., "Thermal-Hydraulic Characteristic of Micro Heat Exchangers", 1991, DSC-Vol. 32, Micromechanical Sensors, Actuators, and Systems, pages 331-339.
	AH	Gad Hetroni et al., "Nonuniform Temperature Distribution in Electronic Devices Cooled by Flow in Parallel Microchannels", IEEE Transactions on Components and Packaging Technologies, March 2001, Vol. 24, No. 1, pages 16-23.
	AI	X. F. Peng et al., "Heat Transfer Characteristics of Water Flowing through Microchannels", Experimental Heat Transfer An International Journal, Vol. 7, No. 4, October-December 1994, pages 265-283.
	AJ	Linan Jiang et al., "Forced Convection Boiling in a Microchannel Heat Sink", Journal of Microelectromechanical Systems, Vol. 10, No. 1, March 2001, pages 80-87.
	AK	Muhammad M. Rahman et al., "Experimental Measurements of Fluid Flow and Heat Transfer in Microchannel Cooling Passages in a Chip Substrate", 1993, EEP-Vol. 4-2, Advances in Electronic Packages, pages 685-692.
	AL	X. F. Peng et al., "Forced convection and flow boiling heat transfer for liquid flowing through Microchannels", 1993, Int. J. Heat Mass Transfer, Vol. 36, NO. 14, pages 3421-3427.
	AM	Lung-Jieh Yang et al., "A Micro Fluidic System of Micro Channels with On-Site Sensors by Silicon Bulk Micromaching", September 1999, Microfluidic Devices and Systems II, Vol. 3877, pages 267-272.
	AN	G. Mohiuddin Mala et al., "Heat transfer and fluid flow in microchannels", 1997, Int. J. Mass transfer, Vol. 40, No. 13, pages 3079-3088, printed in Great Britain.
	AO	J. M. Cuta et al., "Fabrication and Testing of Micro-Channel Heat Exchangers", SPIE Microlithography and Metrology in Micromaching, Vol. 2640, 1995, pages 152-160.
	AP	Linan Jiang et al., "A Micro-Channel Heat Sink with Integrated Temperature Sensors for Phase Transition Study", 1999, 12 th IEEE International Conference on Micro Electro Mechanical Systems, pages 159-164.
	AQ	Linan Jiang et al., "Fabrication and characterization of a microsystem for a micro-scale heat transfer study", J. Micromech. Microeng. 9 (1999) pages 422-428, printed in the U.K.
	AR	M. B. Bowers et al., "High flux boiling in low flow rate, low pressure drop mini-channel and micro-channel heat sinks", 1994, Int. J. Heat Mass Transfer, Vol. 37, No. 2, pages 321-332.
	AS	Yongendra Joshi, "Heat out of small packages", December 2001, Mechanical Engineer, pages 56-58.
	AT	A. Rostami et al., "Liquid Flow and Heat Transfer in Microchannels: a Review", 2000, Heat and Technology, Vol. 18, No. 2, pages 59-68.
	AU	Lian Zhang et al., "Measurements and Modeling of Two-Phase Flow in Microchannels with Nearly Constant Heat Flux Boundary Conditions", Journal of Microelectromechanical Systems, Vol. 11, No. 1, February 2002, pages 12-19.
	AV	Muhammad Mustafizur Rahman, "Measurements of Heat Transfer in Microchannel Heat Sinks", Int. Comm. Heat Mass Transfer, Vol. 27, No. 4, May 2000, pages 495-506.
	AW	Issam Mudawar et al., "Enhancement of Critical Heat Flux from High Power Microelectronic Heat Sources in a Flow Channel", Journal of Electronic Packaging, September 1990, Vol. 112, pages 241-248.
	AX	Nelson Kuan, "Experimental Evaluation of Micro Heat Exchangers Fabricated in Silicon", 1996, HTD-Vol. 331, National Heat Transfer Conference, Vol. 9, pages 131-136.
	AY	E. W. Kreutz et al., "Simulation of micro-channel heat sinks for optoelectronic microsystems", Microelectronics Journal 31(2000) pages 787-790.
	AZ	J. C. Y. Koh et al., "Heat Transfer of Microstructure for Integrated Circuits", 1986, Int. Comm. Heat Mass Transfer, Vol. 13, pages 89-98.
	BA	Snezana Konecni et al., "Convection Cooling of Microelectronic Chips", 1992, InterSociety Conference on Thermal Phenomena, pages 138-144.

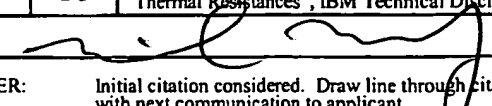
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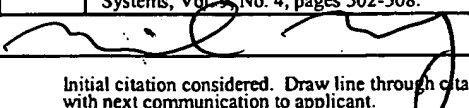
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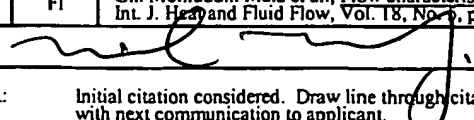
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(37 CFR § 1.98(b))				Filing Date: September 23, 2003	Group Art Unit: 3746
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)					
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	BC	Jerry K. Keska Ph. D. et al., "An Experimental Study on an Enhanced Microchannel Heat Sink for Microelectronics Applications", EEP-Vol. 26-2, Advances in Electronic Packaging, 1999, Vol. 2, pages 1235-1259.			
	BD	Shung-Wen Kang et al., "The Performance Test and Analysis of Silicon-Based Microchannel Heat Sink", July 1999, Terahertz and Gigahertz Photonics, Vol. 3795, pages 259-270.			
	BE	Joseph C. Tramontana, "Semiconductor Laser Body Heat Sink", Xerox Disclosure Journal, Vol. 10, No. 6, November/December 1985, pages 379-381.			
	BF	Sarah Arulanandam et al., "Liquid transport in rectangular microchannels by electroosmotic pumping", Colloid and Surfaces A: Physicochemical and Engineering Aspects 161 (2000), pages 89-102.			
	BG	Jeffery D. Barner et al., "Thermal Ink Jet Print Head Carriage with Integral Liquid Cooling Capabilities", Xerox Disclosure Journal-Vol. 21, No. 1, January/February 1996, pages 33-34.			
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	BO	"Integrally Grooved Semiconductor Chip and Heat Sink", October 1971, IBM Technical Disclosure Bulletin, Vol. 14, No. 5, page 1425.			
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✓	CF	J. M. Eldridge et al., "Heat-Pipe Vapor Cooling Etched Silicon Structure", IBM Technical Disclosure Bulletin, Vol. 25, No. 8, January 1983, pages 4118-4119.					
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✓	CH	M. J. Brady et al., "Etched Silicon Integrated Circuit Heat Sink", IBM Technical Disclosure Bulletin, Vol. 27, No. 1B, June 1984, page 627.					
✓	CI	H. D. Edmonds et al., "Heat Exchange Element for Semiconductor Device Cooling", IBM Technical Disclosure Bulletin, Vol. 23, No. 3, August 1980, page 1057.					
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✓	DA	J. Landrock et al., "Cooling System for Semiconductor Chips", IBM Technical Disclosure Bulletin, Vol. 23, No. 4, September 1980, page 1483.					
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	FK	✓	M. Esashi, <u>Silicon micromachining and micromachines</u> , September 1, 1993, <u>Wear</u> , Vol. 168, No. 1-2, (1993), pages 181-187.		
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OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)					
mk	GL	Gokturk Tune et al., <u>Heat transfer in rectangular microchannels</u> , 2002, Int. J. Heat Mass Transfer, 45 (2002), pages 765-773.			
	GM	D. B. Tuckerman et al., <u>High-Performance Heat Sinking for VLSI</u> , 1981, IEEE Electron Device Letters, Vol. EDL-2, No. 5, pages 126-129.			
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